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July 3, 2003

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Richard H. Hefter, Chief
High Production Volume Chemicals Branch
U.S. Environmental Protection Agency
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1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460-0001

Document Processing Center (7407M)
EPA East - Room 6428 Attn: Section 8(e)
U.S. Environmental Protection Agency
Office of Pollution Prevention and Toxics
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460-0001

Re: TSCA Section 8(e) Reporting For PFOA

Dear Mr. Hefter:

Our law firm currently serves as class counsel for a group of tens of thousands of citizens whose drinking water is contaminated with ammonium perfluorooctanoate (a/k/a APFO/PFOA/FC-143/C-8) (hereinafter "C-8") released from E.I. duPont de Nemours and Company's ("DuPont's") Washington Works fluoropolymer manufacturing facility along the Ohio River in Wood County, West Virginia. During the course of this lawsuit (styled *Jack W. Leach, et al. v. E.I. duPont de Nemours and Company* (Circuit Court of Wood County, WV, Civil Action No. 01-C-608)) and a prior lawsuit during which we represented members of the Tennant family who claimed that C-8 released from DuPont's Dry Run Landfill in Wood County, West Virginia, caused the death of several hundred head of cattle and other damages, including damage to the Tennant's own health (styled *Wilbur E. Tennant, et al., v. E.I. duPont de Nemours & Co., Inc.* (Case No. CA-6:99-0488 (S.D.W.Va.)), we obtained and reviewed nearly one million pages of documents from DuPont's internal files relating to C-8.

Among the documents obtained from DuPont to date are documents relating to DuPont's pregnancy outcome study among its female workers exposed to C-8 at its Washington Works plant back in 1981, and DuPont's knowledge of the presence of C-8 in public drinking water supplies at levels exceeding DuPont's internal community exposure standards. The Environmental Working Group ("EWG") referenced some of these data in its April 11, 2003,

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Richard Hefter
July 3, 2003
Page 2

letter asking USEPA to investigate DuPont's actions with respect to disclosure of birth defect and drinking water contamination data to USEPA, pursuant to Section 8(e) of TSCA, which your office asked DuPont to explain in your letter dated May 22, 2003. (AR-226-1318)

Because of the potential likelihood of substantial harm to our class members or to the public interest from an incorrect understanding or assessment of the birth defect and drinking water contamination data at issue, we submit the following information obtained from DuPont for consideration in connection with your Agency's evaluation of the statements made by DuPont's counsel on this matter in its June 20, 2003, letter responding to your May 22, 2003, letter:

1. March 20, 1981 - 3M submitted a TSCA Section 8(e) notice to USEPA, attaching its report finding birth defects in the eyes of rat fetuses exposed to C-8. (Exhibit A (EID072034-45)) That same day, 3M notified DuPont of the eye defect findings. (Exhibit B (EID079423))
2. March 25, 1981 - DuPont's Medical Director, Dr. Bruce Karrh, summarized the birth defect data received from 3M and DuPont's knowledge of the pregnancy outcome status of Washington Works employees exposed to C-8 as follows:

At present, about 50 women employees have potential for exposure to C-8 compounds at Parkersburg Of the 50 female employees at Parkersburg, three are pregnant now and 2 probably pregnant. The reproductive capability of the others is unknown at present. One employee who worked in the area had a miscarriage followed immediately by a normal pregnancy with a recent normal outcome. Her potential C-8 exposure throughout both pregnancies was described as "heavy." There was one recent abnormal pregnancy outcome with one female employee at the Plant, but she did not work where there was any possibility of exposure to C-8.

Of the employees presently pregnant, one is in her 7th month, one in her 5th month, one in her 3rd month, and 2 probably just pregnant. One complicating factor is that C-8 is retained in the body for a very long time after exposure ceases.

The plan at present is to convene a meeting after Dr. Staples reviews 3-M's work, probably by March 27. . . . If the 3M study is valid, women of child-bearing potential will probably be excluded from jobs where there is potential for exposure to C-8 compounds,

at least until a no-effect level is determined. . . . Haskell
Laboratory will determine what additional testing needs to be done.

(Exhibit C (EID096503))

3. March 27, 1981 - DuPont teratologist, Dr. R.E. Staples, and DuPont pathologist, Taisan Chiu, visited 3M to review the 3M rat birth defect study and concluded that the "study was valid and that the observed fetus eye changes were due to the C-8." (Exhibit B (EID079423) and E (EID079758-9)) 3M delivered a hard copy of 3M's final rat birth defect study to DuPont that same day. (Exhibit D (EID079613))

4. March 31, 1981 - DuPont notified its employees that all female workers would be removed from jobs "where there is potential for exposure to C-8" at DuPont's Washington Works. (Exhibit F (EID079212-3)) In standby questions and answers for those employees, DuPont provided the following information:
 1. Q: How many female employees at your Parkersburg Plant may have been exposed to C-8?

A: About sixty worked in areas where there is potential for exposure.

 2. Q: Have you sampled the blood of these employees to determine if they have elevated organic fluoride levels?

A: Some but not all female employees have been sampled as part of our existing programs.

 3. Q: Do they have levels of C-8 above normal?

A: Yes, some do.

 4. Q: Are any of the sixty female employees pregnant?

A: Yes, two that we know of.

 5. Q: Are there any former employees you know of who may have been exposed to C-8 and who are now pregnant?

A: Yes, one that we know of.

(*Id.*, at EID079214)

5. April 1, 1981 - DuPont began identifying female employees potentially exposed to C-8 at its Washington Works Plant for C-8 blood sampling. (Exhibit B, at EID079423)
6. April 2, 1981 - DuPont's Medical Director, Dr. Bruce Karrh, confirmed that DuPont was evaluating "an epidemiology study for reproductive effects from potential exposure to C-8," that "pregnancy outcome can be studied to answer a simple question - does C-8 exposure cause abnormal child," and that Dr. Karrh had asked to delay such a study until after DuPont completed its first pregnancy outcome study at a different facility and until after 3M provided results of its protocol for conducting its own C-8-specific pregnancy outcome study. (Exhibit G (EID096492))
7. April 6, 1981 - DuPont's Medical Director, Dr. Bruce Karrh, sent a memo stating that DuPont Medical had requested on April 2, 1981, that DuPont delay moving forward with a C-8 pregnancy outcome study but "[s]ince then, . . . recently obtained information indicates there may be a need to do such a study. Medical Division epidemiologists are evaluating how such a study can be accomplished and are communicating with Parkersburg Plant personnel to determine the number of people who may be in the group to be studied." (Exhibit H (EID096486))

On that same date, DuPont issued a revised corporate communications package on the C-8 birth defect issue. (Exhibit B at Attachment IV (EID079439-69) In revised standby questions and answers, DuPont clarified that there are "about 50" women who are potentially exposed to C-8 at the Washington Works plant and provided the following standby question and answer:

"Q. 19. I understand an employee at the Parkersburg plant suffered a miscarriage. Was this related to FC-143 exposure?

A. 19. We have no information that indicates a higher risk of miscarriage due to exposure to FC-143."

(*Id.*, at EID079455)

8. April 9, 1981 - DuPont prepared a "supplemental communication" to its Washington Work's employees to respond to claims of two birth defects having been reported to DuPont among children born to women exposed to C-8 at the Washington Works plant. In those communication materials, DuPont states:

There have been rumors that two women who worked in Fluoropolymers have had children with birth defects. We are not aware of any human birth defects attributable to FC-143. We do know of two women who worked in this area before or during pregnancy whose children reportedly had defects detected at birth. We became aware of this information after 3M notified us of the animal study. We do not know whether there is a relationship. We are investigating this matter further, and we are considering additional studies.

(Exhibit B, at Attachment V(EID079470)) In formal standby questions and answers on the same issue, DuPont provided the following prepared response:

"Q 01. Is it true that two women who worked in the FC-143 area at your Parkersburg plant have had children with birth defects?

A 01. We are not aware of any human birth defects attributable to ammonium perfluorooctanoate, also known as FC-143. We do know of two women who worked in this area before or during pregnancy whose children reportedly had defects detected at birth. We do not know if there is a relationship. We are investigating this matter further, and we are considering additional studies.

Q 02. Can you be more specific about these two defects?

A 02: (Refer question to Dr. Bruce W. Karrh of the Medical Division).

(*Id.*, at EID079472)

9. April 13, 1981 - DuPont Medical Division Epidemiologist, William E. Fayerweather, submitted and circulated among DuPont Medical Division and Business personnel a research proposal entitled "Study of Pregnancy Outcome in Washington Works Employees" (Exhibit I (EID106191-205). See also Exhibit II, at 11-12) The proposal specifically identified its objectives as being to determine

whether: "a. Pregnancy outcome among female Washington Works employees is causally related to their occupational exposure to C-8" and whether: "b. Pregnancy outcome among wives of Washington Works employees is causally related to their husbands' exposure to C-8." (*Id.*, at EID106192). In identifying the "rationale" for the proposed studies, DuPont stated that "exposed female employees and wives of exposed male employees will be studied. Female workers are studied because they may have been exposed to C-8 during or immediately prior to their pregnancies. Wives of male workers are studied because the husbands may somehow bring C-8 home with them and expose their wives at home." (*Id.*, at EID106193) The study proposal defined its "Specific Aims" as follows:

Histories of pregnancy outcome and of potential exposure to C-8 will be ascertained for:

- a. Washington Works active female employees, and
- b. Wives of Washington Works active male employees.

Potential exposure to C-8 will be determined from personal records, medical records, and employee interviews. Pregnancy outcome will be determined via self-administered questionnaires given to female employees and wives of male employees.

If an association is observed between pregnancy outcome and having had potential exposure to C-8, the association will be assessed as to whether it is causal or whether it is due to other confounding factors.

(*Id.*, at EID106193-4) With respect to the statistical significance of any birth defects revealed from the pregnancy outcome study, DuPont provided a table that:

shows the minimum number of births with malformations that must be observed in the study group to say that there is a statistically significant excess ($p < 0.05$). For instance, 2 malformations in 10 exposed live births is a significantly higher rate than a national rate of 2 per 1000. Two malformations per 10 exposed live births is also significantly higher than a plant rate of 0 per 50 nonexposed births.

(*Id.*, at EID106200 (emphasis added), *see also id.*, at EID106205 (Table III))

10. April 14, 1981 - DuPont prepared a memo confirming that it was collecting C-8 C-8 blood samples to "[p]rovide data for pregnancy outcome study and confirm background level," with recognition of potential need for employee communication to "[i]ntroduce and encourage support for the 'pregnancy outcome' study". (Exhibit J (EID090073-5)) DuPont stated at that time, however, that "It is felt that an overall communication of intent of [C-8 blood sampling] program would have a negative impact at this time." (*Id.*, at EID090073)
11. April 15, 1981 - A C-8 pregnancy outcome study questionnaire was drafted and approved by DuPont Medical Director, Dr. Bruce Karrh, and Dr. B. Culpepper. (Exhibit K (EID102437) and Exhibit L (EID106216-23)) In addition to information relating to reproductive/pregnancy issues, DuPont's C-8 pregnancy outcome questionnaire also sought information regarding the following specific medical conditions:
 - Anemia;
 - Sugar diabetes;
 - Thyroid condition;
 - Epilepsy, fits or other neurological conditions;
 - Kidney or bladder condition;
 - Liver condition;
 - Any type of cancer; and
 - Heart condition.

(Exhibit L, at EID106218)
12. April 16, 1981 - DuPont Medical Division personnel, including Dr. B. Culpepper, and business representatives, including H.E. Serenbetz, met and discussed the C-8 pregnancy outcome study. (Exhibit K (EID102437))
13. April 23, 1981 - Another meeting occurred between DuPont Medical Division personnel, including Dr. Bruce Karrh, and business personnel, including H.E. Serenbetz, to discuss the C-8 pregnancy outcome study during which Washington Works plant "pregnancies by year and pay class presented; sample sizes for statistical significance presented." (*Id.*)

14. April 28, 1981 - DuPont's Haskell Laboratory began its own study on C-8 birth defects in rats, stating that "[i]n the interim, our standard of 0.-0.4 ppm total organic fluorides will continue to be used as a blood level that will not mandate removal of females from the work place." (Exhibit M (EID096481))
15. May 8, 1981 - DuPont calculated "abnormal pregnancy outcome rates . . . for entire company, 1979-1980." (Exhibit K (EID102437))
16. May 14, 1981 - The first set of formal C-8-specific blood results for female Washington Works employees were provided by DuPont's Haskell Laboratory to the Medical Director of DuPont's Washington Works plant, Dr. Younger Power. (Exhibit N (EID713271-3)). The results reflected testing of 48 women at the Parkersburg facility, including "Employee W"^{1/} with a C-8 blood result of 0.048 ppm. (*Id.*, at EID713272) The C-8 blood results for 15 of the 48 women exceeded 0.4 ppm. (*Id.*)
17. May 15, 1981 - "Informed consent and confidentiality of data package [s]" were sent to DuPont's Medical Director, Dr. Bruce Karrh, in connection with the C-8 pregnancy outcome study. (Exhibit K (EID102437))
18. May 19, 1981 - DuPont's Haskell Laboratory forwarded additional C-8-specific blood data results to Dr. Younger Power, Medical Director for DuPont's Washington Works plant. (Exhibit O (EID713274-5)) The data contained sample results for an additional 13 women, including "Employee X" with a C-8 blood result of 2.5 ppm, along with the results of C-8 detected in "cord blood" of "Baby Y" (detected at 0.055 ppm) and C-8 blood results for mother, "Employee Y," of 0.070 ppm."^{2/} (*Id.*, at EID713275) The C-8 blood results for 8 of the 13 women, including "Employee X," exceeded 0.4 ppm. (*Id.*)

^{1/} Although we are submitting copies of the DuPont documents that have the employee names redacted to protect their privacy, we have obtained non-redacted versions from DuPont that confirm that the four employees we reference in this letter as "Employee W," "Employee X," "Employee Y," and "Employee Z" are, in fact, the individuals being referenced in the documents.

^{2/} The non-redacted version of Exhibit O indicates that the last C-8 blood result in the chart (0.055 ppm) is from "cord blood" and for a "baby" with the same last name as Employee Y, whose C-8 blood results are provided in the immediately preceding entry on the chart (0.070 ppm).

19. May 26, 1981 - DuPont summarized its "C-8 program status" in a memorandum indicating that previous communications to employees had indicated that DuPont had planned "some follow-up to see if birth defects may have resulted from exposure to C-8" and that "[a]lthough these programs are either just underway or still in the discussion stage, a status report is in order." (Exhibit P (EID090076)) With respect to the status to C-8 blood sampling results, a "summary of sampling results available through May 14" was attached at Attachment III, which summarized C-8 levels detected among workers at other DuPont facilities, C-8 levels detected among 56 "current Washington Works female employees," and "births and pregnancies" among those Washington Works female employees. (*Id.*, at EID090083-5)

Among the information presented with respect to such "births and pregnancies" is a reference to "Child- 4 months. One nostril and eye defect" and a "0.048 ppm C-8 blood level, which corresponds with the 0.048 C-8 blood level reported for "Employee W." (*Compare id.*, at EID090083 with Exhibit N, at EID713272. *See also* Exhibit R, at EID079375). The "births and pregnancies" chart also references another "Child-2 plus years. Unconfirmed eye and tear duct defect" and a 2.5 ppm C-8 blood level, which corresponds with the 2.5 ppm C-8 blood level reported for Washington Works "Employee X". (*Compare* Exhibit P, at EID090083 with Exhibit O, at EID713275. *See also* Exhibit R, at EID079375). Although C-8 blood results were reported for "umbilical cord blood" with respect to a separate "normal child," no information is provided with respect to whether any C-8 had been detected in the blood of the two children with reported birth defects.

20. July 16, 1981 - DuPont's Haskell Laboratory forwarded to Dr. Younger Power, Medical Director for DuPont Washington Works, additional C-8 blood sampling data, including results from several men^{3/} and results for the baby of "Employee W"^{4/} indicating a C-8 blood level of 0.012 ppm, which corresponds with the results DuPont listed for the baby born to Washington Works "Employee W," which DuPont had identified as a baby born with "one nostril and eye defect", (*see* Exhibit Q (at EID713277), P (at EID090083), and R (at EID079375). The C-8

^{3/} The non-redacted version of this document confirms male names for at least 10 of the employees sampled.

^{4/} The non-redacted version of this document references a male name and a reference to an "infant" with the same last name as "Employee W" next to the 0.012 ppm C-8 blood test result.

blood results also confirmed levels of C-8 in the blood of 7 of the employees sampled at levels exceeding 0.4 ppm C-8 in blood. (Exhibit Q, at 713277)

21. July 22, 1981 - A meeting occurred among DuPont Medical Division personnel, including Dr. B. Culpepper, and business personnel, including H.E. Serenbetz, in which Mr. Serenbetz announced that all further work on the C-8 pregnancy outcome study was now "on-hold." (Exhibit K (EID102437))
22. September 16, 1981 - A DuPont employee updated by hand DuPont's May 14, 1981 chart summarizing "birth and pregnancies" among female Washington Works employees to incorporate the C-8 blood results received in July of 1981. (Exhibit R (EID079371-5))^{5/} With respect to results of 1.5 ppm C-8 in blood originally reported in May of 1981 for an individual who was "5 months pregnant," the handwritten notes from September of 1981 indicate that that individual, "Employee Z," was now "on pregnancy leave." (*Id.*, at EID079375)
23. October 20, 1981 - DuPont's Haskell Laboratory forwarded to the Washington Works' Medical Director, Dr. Younger Power, additional C-8 blood sampling results, including new C-8 blood results for "Employee Z" indicating 1.0 ppm C-8 in her blood and 0.43 ppm C-8 in the "cord blood" for a "baby" with the same last name as "Employee Z." (Exhibit S (EID713278-9))^{6/} Both of those results, along with the results from 7 of the other employees tested, exceeded 0.4 ppm C-8 in blood.
24. December 15, 1981 - DuPont released a "C-8 Status Report" to its Washington Work's employees in which DuPont stated that, upon review of additional studies being performed by DuPont and 3M on the ability of C-8 to cause birth defects un animals, DuPont was taking the position that "it does not seem that the observed effects in the eyes of the unborn rats were due to C-8." (Exhibit T (EID089462))
25. December 18, 1981 - A DuPont Washington Works employee informed DuPont's corporate office in Wilmington that two female employees at the Washington

^{5/} Although the original version of Exhibit R produced by DuPont contains the employee names and employee I.D. numbers, we have redacted that information in the copy attached hereto.

^{6/} Again, the names are confirmed in the non-redacted versions of the documents produced by DuPont.

Works had raised questions after receiving DuPont's December 15, 1981, memo in which DuPont stated that it now believed C-8 did not cause birth defects. According to the Washington Works employee:

Two of them had questions that we could not answer . . . The first person has a child with birth defects around the eye. She would like to know if the 3M studies found any malformations other than right in the eye. She is especially concerned about the eyelid. She would also like to be able to read the reports from the DuPont animal studies herself. The second person has a child with 0.4 ppm C-8 in its blood. She would like to know what is the safe blood level for her and the baby. She would also like to know if the baby's liver is more susceptible to damage by C-8 than that of an adult and what signs and symptoms she should be alert to. Lastly, she would like to know if the studies showed any other embryological effects.

(Exhibit U (EID079544))

26. February 4, 1982 - 3M and DuPont scientists, including R.E. Staples and Gerry Kennedy, met to discuss additional C-8 birth defect rat studies recently conducted by the companies, along with the results of an additional rabbit study soon to be completed by 3M, all of which the companies agreed should be interpreted as being "negative" for birth defects. (Exhibit V (EID071712)) During that meeting, DuPont and 3M agreed to inform both company's employees of the companies' view of the additional C-8 birth defect work in animals on March 3, 1982, and to meet with USEPA to present their joint interpretation of the animal birth defect data during the week of March 10, 1982. (*Id.*, at EID071713)
27. March 3, 1982 - DuPont notified all of its employees that DuPont had determined that, because "C-8 has not been shown to produce teratogenic effects in the several animal studies, we conclude that female employees of childbearing capability no longer need to be excluded from areas where there is potential for exposure to C-8. All employees both male and female, are now eligible to work in Teflon." (Exhibit W (EID089464)) There is no reference in the employee communication to the data DuPont had obtained with respect to human eye defects, pregnancy outcome, or C-8 blood levels among its Washington Works employees and children.

28. March 12, 1982 - DuPont and 3M scientists met with USEPA's Office of Toxic Substances to discuss the companies' interpretation of their C-8 animal birth defect studies. (Exhibit X (EID071705-6)) During the meeting, 3M provided copies of its additional rat and rabbit birth defects studies to USEPA and DuPont provided copies of its two rat birth defect studies. Although a DuPont memorandum summarizing the contents of the discussions with US EPA indicates that the companies discussed the animal studies with USEPA, there is no reference to any mention of DuPont's C-8 human pregnancy outcome study or any of the human birth defect data. (*Id.*)

According to DuPont:

A few of the EPA people seemed to find it hard to understand how highly positive findings with good dose-response relationship could subsequently turn out to be negative. I don't think [3M] completely convinced the sceptics by their response, which including the factor of bias through not examining the slides blind. . . . EPA officials said that there is no mechanism for withdrawing an 8e notification or for EPA to declare it not a cause for concern. However, the 3M and DuPont reports of studies on FC-143 will be placed in the same file as the 8e notice, and should anyone ask about the 8e notice on FC-143, he will be told about the conclusions of the reports.

(*Id.*, at EID071706)

29. March 16, 1982 - DuPont notified USEPA's Office of Toxic Substances that, according to DuPont's animal studies, "C-8 does transfer across the placenta of the rat." (Exhibit Y (EID071704)) In that letter, DuPont made no mention of its finding of C-8 in the blood and cord blood of human babies born to its own female employees exposed to C-8 at the Washington Works. (*Id.*)
30. November 1982 - DuPont's Medical Director, Dr. Bruce Karrh, advised DuPont's business representative that:

I recommend that available practical steps be taken to reduce this [C-8]exposure because: Our knowledge of the chronic health effects to low levels of C-8 is quite limited; C-8 is retained in the blood for a long time, creating a concern in other areas such as blood donations, etc.; All employees, not just Teflon area workers, are exposed; and There is obviously great potential for current or future

exposure of members of the local community from emissions leaving the [Washington Works] Plant perimeter.

(Exhibit Z (EID096449-50))

31. March 1984 - DuPont detected C-8 in the public drinking water supplies of both the Lubeck Public Service District ("LPSD"), which was drawing water from wells immediately adjacent to the southwestern border of DuPont's Washington Works Plant in West Virginia, and the Little Hocking Water Association, which was drawing water from wells in Ohio located northeast of the Plant, across the Ohio River. (Exhibit AA (EID079096-100)) C-8 was detected as high as 1.5 ppb in the LPSD water supply and as high as 0.6-0.8 ppb in the Little Hocking Ohio water supply. (*Id.*, at EID079098.01)
32. June 12, 1987 - After additional C-8 water testing again detected C-8 in the LPSD public water supply at 1.9 ppb, (Exhibit BB (EID079091-4)), DuPont employee H.A. Smith, with the Washington Works Plant's Safety, Energy & Environmental Affairs Manufacturing Division, requested that Gerry Kennedy of DuPont's Haskell Laboratory "establish an acceptable level for C-8 in blood, and an acceptable level for C-8 in community drinking water." (Exhibit CC (EID079034))
33. June 25, 1987 - Gerry Kennedy of DuPont's Haskell Laboratory advised H. A. Smith that "[a]n acceptable level for ammonium perfluorooctanoate (C-8) in the blood of workers would be 0.5 ppm" and that "[a]n acceptable level for community drinking water would be 5 ppb." (Exhibit DD (EID078779-80)) With respect to the 5 ppb drinking water limit, Mr. Kennedy cautioned that it "doesn't take into account the time factor (worker exposed 8 hours, not-exposed 16 hours, etc. whereas drinking water intake could be anytime during 16 hours, off 8 hours, etc.)." (*Id.*, at EID078780)
34. April 1991 - After DuPont confirmed through additional public water supply sampling activities that the levels of C-8 had increased to around 2.7 ppb, a DuPont employee asked that a specific request be made to DuPont's "Acceptable Exposure Limits" Committee ("AEL Committee") "to establish a CEG for ammonium perfluorooctanoate in drinking water," pursuant to the guidelines established by DuPont's Haskell Laboratory for setting "Community Exposure Guidelines." (Exhibit EE (EID072215)) It was requested that the AEL Committee set the CEG for C-8 in community drinking water after considering "the actual health effects to residents adjacent to our Washington Works Plant from exposure to C-8," and on the assumption that "the value we will get will be based on 20% of

total intake allocated to water; and 80% to air since our CEG for C-8 has already been established for air" and DuPont's own, internal air modeling already had confirmed that nearby residents would be exposed to C-8 through the Washington Works' air emissions. (*Id.*)

35. June 11, 1991 - DuPont's AEL Committee selected 1 ppb as the CEG for C-8 in community drinking water, assuming potential community exposure through both air and drinking water. (Exhibit FF (EID097177-85) DuPont defined the purpose of its CEG at that time as follows:

CEGs are exposure guidelines that are expected to be without any effect to members of the community during continuous 24-hour a day exposure to a chemical or physical agent. CEGs may be recommended for air or water or both. As with AELs, CEGs are recommended based on the best available information from industrial experience, animal toxicity studies, controlled human exposure studies, and epidemiological findings. However, because of the variability of sensitivities of members of the community (*e.g.*, the infirm, the old, the young, pregnant females, etc), versus the healthy worker involved with an AEL, a larger uncertainty factor needs to be used in extrapolating these data to a CEG.

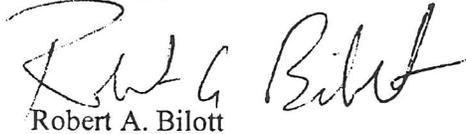
(*Id.*, at EID097179)

36. September 1991 - DuPont reviewed additional public drinking water results from the summer of 1991 confirming C-8 in the LPSD public drinking water supplied by the LPSD's original wells as high as 3.9 ppb, and as high as 2.4 ppb in the LPSD's new wells, now located "2.7 miles south-southwest of Washington Works." (Exhibit GG (DE000245-56)
37. Although the C-8 Assessment of Toxicity Team ("CAT Team") established under a November 2001 Consent Order between DuPont and the State of West Virginia announced that it had selected a 150 ppb "screening level" for C-8 in drinking water in May of 2002, DuPont has not changed its internal 1 ppb CEG for C-8 in community drinking water since 1991 and, with respect to the relationship between that CEG and "screening levels," DuPont used its CEGs to calculate a 3 ppb

Richard Hefter
July 3, 2003
Page 15

"preliminary screening level for C-8 in groundwater used as drinking water"
(assuming no exposure to C-8 in air) that it submitted to USEPA in June of 1999
in connection with its Washington Works Plant. (Exhibit HH, at 24)

Very truly yours,



Robert A. Bilott

RAB:mdm
Enclosures

cc: Dr. Charles M. Auer (USEPA OPPT) (w/o encls.) (letter by telecopy)
Mary Dominiak (USEPA OPPT) (for inclusion in AR-226) (w/encls.) (letter by telecopy)
Jennifer Seed (USEPA) (w/encls.) (letter by telecopy - enclosures by hard copy)
R. Edison Hill, Esq. (w/ encls.)
Larry A. Winter, Esq. (w/ encls.)
Gerald J. Rapien, Esq. (w/o encls.)